

THE SOUTH AFRICAN SPECIES OF AIZOACEAE

VI. ACROSANTHES

by

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ACROSANTHES

Acrosanthes is a small genus distinctive in both floral structure and in habit which is confined to the western and south-western part of the Cape Province.

By most authors the genus has been regarded as being closely allied to *Aizoon* and *Galenia* (e.g. Fenzl Ann. Wien. Mus. 2: 218. 1840; Sonder Fl. Cap. 2: 471. 1862; Benth. & Hook. Gen. Pl. 1: 823. 1867; Pax in Eng. & Prantl Nat. Pflznf. 3. 1b: 43. 1889; Phillips Gen. S. Afr. Pl. ed. 2. 293. 1951; Friedr. Mitt. Bot. Munch. 12: 58. 1955). It was treated as a subgenus of *Aizoon* by Dietrich Syn. Pl. 3: 130. 1847. On the other hand, K. Müller, Bot. Jahrb. 42. Beibl. 17: 54—98. 1908, transferred it to the tribe Mollugineae and placed it in close association with *Limeum*, largely on account of the solitary basal ovules. His view was followed by Pax & Hoffmann, Eng. & Prantl Nat. Pflznf. ed. 2. 16c: 194. 1934. The general floral structure seems more in keeping with the former view.

ACROSANTHES

Ecklon & Zeyher Enum. 328. 1837.

Aizoon subgen. *Acrosanthes* D.Dietr. Syn. Pl. 3: 180. 1847.

Glabrous prostrate or sprawling perennials. Stems woody at least at the base. Leaves opposite, exstipulate, usually connate at the base. Flowers solitary at the nodes, pedunculate, bisexual. Perianth 5-lobed the segments green outside, white inside, united at the base, the lobes longer than the tube. Stamens 8 to numerous, inserted on the lower part of the perianth, sometimes in groups. Disc wanting. Ovary superior, 2-chambered but often incompletely so, with one basal ovule in each chamber: stigmas two, short. Fruit thin-walled, usually 1-chambered, with 1 or 2 seeds. Seeds compressed, reniform or orbicular, rugose.

The type species is *A. anceps* (Thunb.) Sond. (*A. fistulosa* E. & Z.).

The solitary flowers have often been described as being axillary but they are really terminal and the flowering shoot a sympodium. When creating the genus Ecklon & Zeyher described three species. Sonder

Fl. Cap. l.c., added a fourth. Since that time the genus has received little attention. Five species are now recognised, one being described for the first time.

KEY TO THE SPECIES.

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| 1. Leaves terete or semiterete: flowers 0.5—0.8 cm. long: stamens numerous | 5. <i>teretifolia</i> |
| 1. Leaves flat, oblanceolate, oblong or obovate: flowers not over 6 mm. long: stamens not more than 20. | |
| 2. Flowers on peduncles at least as long as the perianth: perianth segments not keeled on the back. | |
| 3. Leaves 1—2 cm. long, up to 0.5 cm. wide: flowers 5—6 mm. long: perianth segments unequal: stamens 15—20: stems with prominent opposite ridges . . | 1. <i>anceps</i> |
| 3. Leaves not over 1.2 cm. long, and 3 mm. wide: flowers 2—3 mm. long: perianth segments about equal. | |
| 4. Leaves oblanceolate, slightly narrowed to the base: flowers about 3 mm. long: stamens 12—20: green or brownish prostrate plant . . | 2. <i>angustifolia</i> |
| 4. Leaves ovate, petiolate, small: flowers 2 mm. long: stamens 8—10: blackish plant in close flat mats | 4. <i>microphylla</i> |
| 2. Flowers sessile or on peduncles shorter than the perianth: perianth 4—6 mm. long, the segments keeled on the back | 3. <i>humifusa</i> |

1. *A. anceps* (Thunb.) Sond. Fl. Cap. 2: 272. 1862.

Trianthema anceps Thunb. Prod. Pl. Cap. 80. 1794.

A. fistulosa Ecklon & Zeyher Enum. 328. 1837.

Aizoon fistulosum D.Diet. Syn. Pl. 3: 130. 1847.

Stems woody at the base, up to 50 cm. long, often much branched, the younger bright brown, the internodes with opposite acute ridges. Leaves oblong or obovate to oblanceolate, rather thick, 1—2 cm. long, 0.2—0.5 cm. wide, mucronate-acute to acuminate, distinctly narrowed to the base. Leaves spreading or secund ascending. Flowers on spreading or deflexed flattened peduncles 0.8—3 cm. long. Perianth 5—6 mm. long, the lobes acuminate, two longer than the others. Stamens 15—20: anthers white. Fruit rounded, mucronate, slightly shorter than the perianth. Seeds black, obtusely tuberculate.

The type is in herb. *Thunberg* U.

Stones or gravel on the lower mountain slopes in the western part. Leaves often brown, sometimes glaucous. Very variable in size and in the amount of branching. Internodes from 2.5 cm. long to very short. In exposed sites the whole plant may be compact and mat-like.

CLANWILLIAM. Heerenlogement *Zeyher* 2146 S.SAM; *Grass-ruggens Pillans* 8800 BOL; *Keerom Esterhuysen* 17874 BOL; *Pillans* 5776 BOL; *Algeria Lervyns* CT.

PIKETBERG. Piketberg Mt. *Bolus* 7547 K; *Guthrie* 2613 NBG; *Zinn* SAM.

TULBAGH. Waterfall *MacOwan* 1615 BM.G.K.SAM; Tulbagh *Schlechter* 7479 BM.BOL.G.K; Witzenberg *Zeyher* 721 BM.BOL. G.K.S. SAM; Roodesandberg *Adamson* 1025 CT; *Compton* 6563 BOL.NBG; Tulbagh Kloof *Zeyher* 11 S.

WORCESTER. Goudini Baths *Adamson* 4410.

Without locality:—*Drege* (*A. fistulosa*) S; *Thunberg* G.

2. ***A. angustifolia*** Ecklon & Zeyher Enum. 328. 1837.

Aizoon angustifolium Diet. Syn. Pl. 3: 130. 1847.

Stems woody, branched, with internodes as long as the leaves or much shorter, the younger with small opposite ridges, the older terete. Leaves oblanceolate to linear-obovate, 0·4—1·2 cm. long, about 0·2 cm. wide, acute, usually mucronate, slightly narrowed to the base. Flowers on peduncles 0·3—1 cm. long. Perianth about 3 mm. long, the lobes acute, almost equal, the inner with membranous edges. Stamens 12—20. Fruit shorter than the perianth. Seeds black, rather finely rugose.

The type is *E. & Z.* 2147 B(lost), cotype S.

Sand or stones on mountains along the west coast.

Variable in the amount of branching and in the length of the internodes. Fenzl, Ann. Wien. Mus. 2: 271. 1840, described two varieties (*a*) *dodecandra* with very short internodes, and (*b*) *icosandra* with longer ones. There does not seem to be any other real distinction between them, nor is there any clear-cut line of separation. The differences seem largely the result of habitat conditions and the varieties cannot be maintained. The species is much like *A. anceps* and often confused with that in collections. It is distinguished by a more woody habit, much narrower leaves, smaller flowers with almost equal perianth segments, and by smoother seeds. The confusion between the species has been partly due to Sonder having referred *Zeyher* 721 to a variety of this species. It is certainly a slender form of *A. anceps*.

CLANWILLIAM. Pakhuis Pass *Acocks* 15040 K.PRE: Elandsfontein v. *Breda* 220 K.PRE; Algeria *Lewis* BOL.

PIKETBERG. Piketberg Mt. *Bodkin* 7547 PRE: *Drege* S.

CERES. Olifants Riv. *Esterhuysen* 13457 BOL; Schurftberg *Primos* SAM; Tafelberg *Esterhuysen* 3942 BOL.

TULBAGH. Waterfall *Compton* 12403 NBG; *Ecklon & Zeyher* 2147 S; *Leighton* 181 BOL.

WORCESTER. Botha *Compton* 18685 NBG.

Without locality:—*Drege* (*Didaste decandra*) BM.G.K.TCD.

3. ***A. humifusa*** (Thunb.) Sond. Fl. Cap. 2: 472. 1862.

Trianthema humifusa Thunb. Prod. Pl. Cap. 80. 1794.

A. decandra Fenzl. Ann. Wien. Mus. 2: 270. 1840.

Yellow-green, in flat patches, up to 30 cm. across. Stems woody, with numerous short branches. Leaves secund, ascending, crowded, oblong obovate or almost spatulate, 4—6 mm. long, 1—3 mm. wide, acute, narrowed to the base, distinctly connate. Flowers about as long as the leaves. Peduncles 0.5—3 mm. long. Perianth 4—6 mm. long, the segments acute or acuminate, keeled on the back at least at the tip. Stamens about 10. Fruit as long as the perianth. Seeds flat.

The type is in herb. *Thunberg* U.

Rather rare on mountains on the west coast.

Rather pale green or yellowish. Distinguished from compact states of other species by the erect secund leaves, the almost sessile rather large flowers, and the keeled perianth segments.

CLANWILLIAM. Wuppertal *MacOwan* 3271 SAM; Heuning Vlei *Esterhuysen* 7481 BOL.SAM, 15016 BOL.NBG.PRE: Blaauwberg *Drege* S.

CERES. Sandfontein *Schlechter* 10142 BM.BOL.K.G.S.; Gydoberg *Bolus* BOL.

WORCESTER. Onklaarberg *Stokoe* PRE.

Without locality:—*Drege* (*Didaste pentandra*) BM.G.K.TCD; *Montini* S.

4. *A. microphylla* Adamson sp. nov.

Lignosa prostrata ramosa. Folia parva nigrescentia congesta ovata petiolata. Flores parvi foliis aequilongi vel paulo longiores. Pedunculi perigonio duplo vel triplo longiores. Perigonii segmenta albomarginata, acuta vel mucronata. Stamina 8—10. Fructus compressus perigonio brevior.

Blackish green in compact flat patches. Stems woody, with many short leafy branches. Leaves crowded, dark coloured, 4—6 mm. long, 1—2 mm. wide, elliptical-ovate, acute, at the base narrowed to a petiole as long as the blade. Flowers small, on peduncles 4—6 mm. long. Perianth segments 2—3 mm. long, smooth on the back, acute or mucronate, with membranous edges. Stamens 8—10, usually in pairs. Stigmas rather long.

The type is *Compton* 7988 NBG.

Rocks on mountain summits.

Patches 20—40 cm. across, the stems horizontal, stout, woody. Hitherto confused with *A. humifusa* but differing in the much darker colour, more woody stems, small petiolate leaves, much smaller pedunculate flowers, and the perianth segments smooth on the back.

CLANWILLIAM. Krakadouw Pk. *Bolus* 26386 BOL: Boontjes Vlei *Stokoe* SAM.

CERES. Tafelberg *Compton* 10083 NBG: Gydoberg *Schlechter* 10236 BM.G.K.S.

WORCESTER. Waaihoek Pk. *Barnard* 731 SAM: *Esterhuysen* 15123, 22226, 22584 BOL; Mt. Brodie *Esterhuysen* 8442 BOL: Matroosberg *Esterhuysen* 14215 BOL: *Guthrie* 3958 BOL: Stettynsberg *Esterhuysen* 11065 BOL: Buffelshoek Pk. *Esterhuysen* 24070 BOL.

LAINGSBURG. Witteberg *Compton* 7988 NBG.

MONTAGU. Eendragt *Compton* 18411 NBG.

5. *A. teretifolia* Ecklon & Zeyher Enum. 328. 1837.

Aizoon teretifolium Dietr. Syn. Pl. 3: 130. 1847.

Green or brownish, sprawling or less often semierect. Stems woody at the base only, up to 80 cm. long, with internodes 0.5—3 cm. long, the younger terete. Leaves linear, cylindrical or sulcate above especially when dry, straight or curved, 1—2 cm. long, often secund, with an outwardly bent mucro at the tip, often with axillary fascicles of smaller leaves. Peduncles 0.5—1.5 cm. long, ascending, spreading or partly deflexed at the fruiting stage. Perianth 0.4—0.8 cm. long, the lobes acute with membranous edges, narrow on the outer, broad on the inner. Stamens numerous, 25 or more, uniformly arranged, not in groups: filaments dark coloured: anthers white. Fruit rounded, shorter than the perianth. Seeds dark brown, rugose.

The type is *Ecklon & Zeyher* 2148 B(lost), cotype S.

Sandy or stony flats and lower slopes in the south-west Cape.

Plants green or brown, very variable in size, habit, the amount of branching, the length of the internodes, and the length and thickness of the leaves. The more extreme forms are connected by all stages of intermediate.

TULBAGH. Tulbagh *Ecklon & Zeyher* S: Roodesandberg *Compton* 6623 BOL.NBG: Sevenfountains *MacOwan* 3057 SAM.

PAARL. Paarl *Alexander* K: Paarl Mt. *Compton* 22945 BOL.NBG: Drege S: Franschoek Pass *Acock* 3852 S: *Compton* 20202, 21901 NBG: Wemmershoek Pk. *Esterhuysen* 11270 BOL.

STELLENBOSCH. Stickland *Acock* 1299 S: Duivelsbosch *Bowie* K.

MALMESBURY. Hopefield *Compton* 18917 NBG: *Leighton* 2458 BOL.PRE.

CAPE. Doornhoogte *Ecklon & Zeyher* 78 S: Melkbosch *Adamson* 4678: *Olivier* KIR: Cape Town *Worsdell* K: Platteklip *Giffen* CT: Muizenberg Mt. *Adamson* 1277 CT: *Bolus* 368 BM.BOL.K.S.SAM: *Guthrie* 939 CT: *Prior* K: Steenberg *Compton* 17868 NBG, 13804 NBG.PRE: *Esterhuysen* 15836 BOL: *Lewis* 1803 SAM: *Wolley-Dod* 3581 BM.BOL.K: Fishhoek *Bolus* 4851 BOL.

CALEDON. Sir Lowry Pass *Hafstrom* S: Highlands *Compton* 12338
BOL.NBG: Houwhoek *Adamson* 4425: *Bolus* 9871 BOL: *Guthrie* NBG:
Schlechter 7358 BM.BOL.G.K.S.SAM: Caledon *Bolus* 9903 BOL.K:
Swartberg *Ecklon* S: *Harvey* TCD: *Zeyher* 2148 S.SAM.TCD: Zondags-
kloof *Compton* 10259 NBG: Babylons Tower *Ecklon* & *Zeyher* 52.8 S:
Onrust *Esterhuysen* 19263 BOL.

BREDASDORP. Elim *Levy's* 8434 CT: Baardscheersbosch *Stokoe*
SAM: Brandfontein *Esterhuysen* 19111 BOL.

Without locality:—*Drege* (*Didaste icosandra*) BM.G.K.TCD, do
(*Didaste teretifolia*) K.S.: *Gillett* 66 K: *Harvey* K.